Abstract

A multi-chip module (MCM) designed using standard die SAS expander components for rapidly designing a customized SAS expander having a predetermined number of ports. A number of standard expander die circuit components are selected and disposed on a MCM design. Each expander die circuit has a predetermined number of internal ports within the MCM and a predetermined number of ports for coupling to SAS devices external to the MCM. An internal fabric is disposed on the MCM and selectively coupled to internal ports of the SAS expanders to provide the desired number of external ports with desired routing therebetween. The internal fabric may be statically configured or dynamically programmed. The internal fabric routing may provide wide port routes as well as standard port connections.